
CARTER COUNTY

(Carter County Water Service Area Map)

- Estimated 1999 population of 26,700--85% on public water
- Estimated 2020 population of 30,000--95% on public water
- 390 miles of water lines, with plans for 180 additional miles
- Estimated funding needs for public water 2000-2005: \$26,900,000
- Estimated funding needs for public water 2006-2020: \$6,800,000

Carter County had an estimated population of 26,687 (10,610 households) in 1999 with a projected population of 30,000 (12,900 households) in 2020. Public water is provided to 9,550 customers, or about 85 percent of the county's residents. In areas of the county not served by public water about 4 of 5 households rely on private domestic wells and 1 of 5 households relies on other sources. About 1,350 households will be added to public water service through new line extensions in 2000-2020.

Estimated Costs - Proposed Projects, 2000-2005

COUNTY/System		New Customers		Rehab	Source	Treatment	Tanks/ Pumps	Total
	Miles	Number	Cost in \$1000	In \$1000	in \$1000	in \$1000	in \$1000	in \$1000
CARTER								-
Grayson	29	275	1,400			8,000	600	10,000
Olive Hill				500	6,000			6,500
Rattlesnake Ridge W/D						8,000	2,400	10,400
Total	29	275	1,400	500	6,000	16,000	3,000	26,900

Estimated Costs - Proposed Projects, 2006-2020

COUNTY/System		New Customers		Rehab	Source	Treatment	Tanks/ Pumps	Total
	Miles	Number	Cost in \$1000	in \$1000	in \$1000	in \$1000	in \$1000	in \$1000
CARTER								-
Grayson								-
Olive Hill								-
Rattlesnake Ridge W/D	150	1,075	6,800					6,800
Total	150	1,075	6,800					6,800

PUBLIC WATER SYSTEMS

Carter County is served by 3 community systems: 2 municipal water systems, the City of Grayson Utilities and the City of Olive Hill; 1 water district, Rattlesnake Ridge Water District, and 1 non-community system.

WATER SERVICE AREAS

CARTER COUNTY

Kentucky

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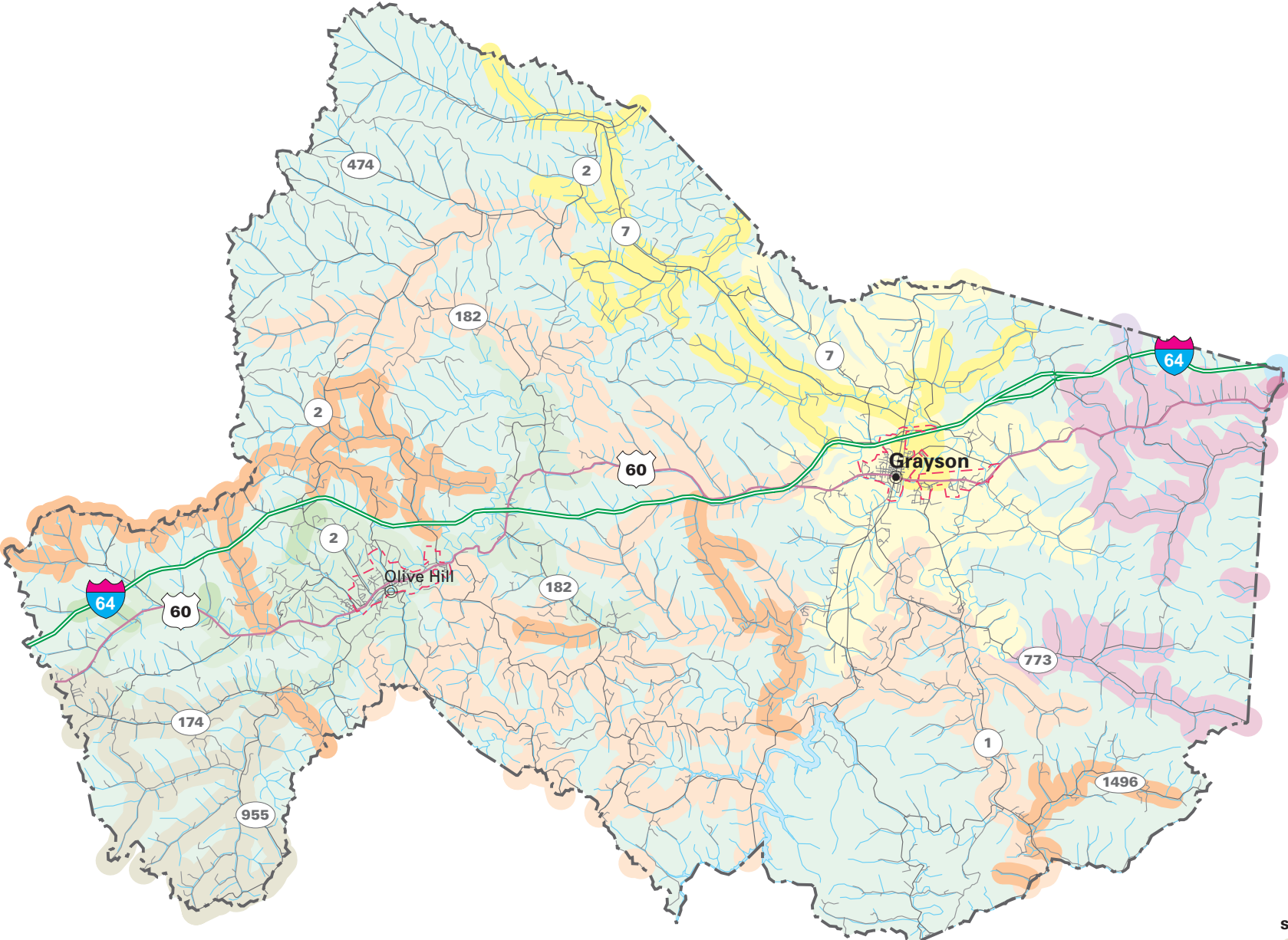
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WATER SERVICE STATUS BY OWNER		
EXISTING SERVICE AREA	PROPOSED SERVICE AREA	
		ROWAN WATER INCORPORATED
		RATTLESNAKE RIDGE WATER DISTRICT
		OLIVE HILL MUNICIPAL WATER WORKS
		GREENUP WATER PLANT
		GRAYSON UTILITY COMMISSION
		CANNONSBURG WATER DISTRICT
		BIG SANDY WATER DISTRICT

GRAYSON UTILITY COMMISSION

PWSID: 0220164
System Type:..... COMMUNITY
Owner Type:..... WATER DISTRICT
Surface Source:..... GRAYSON INTAKE
Purchase Source:
Well Source:
Sells Water to: RATTLESNAKE RIDGE WATER DISTRICT
Treatment Plant Capacity (MGD):..... 1.50
Percent Daily Average Production:..... 80.00
Total Tank Storage Capacity (gallons):..... 1,710,000.00
Total Service Connections: 3,140.00
Number of Employees:..... 6.00
Treatment Operator Class:..... 2D
Distribution Operator Class:..... 3A
Customer Rate for 1,000 Gallons:..... Not available
O/M costs 1997:..... Not available
O/M costs per Service Connection: Not available
Net Revenue 1997:..... Not available
Total Water Produced 1997 (gallons):..... Not available
Water Sold 1997 (gallons):..... Not available
Unaccounted-for Water 1997 (%): Not available

The City of Grayson Utilities gets it's raw water from the Little Sandy River and treats it's water at a 1.5 million gallon a day plant with an average daily production of 1,234,184 gallons. The treated water storage system consists of four storage tanks distributed throughout the service area with storage capacity of 1,710,000 gallons. . The system has a current total of 3,140 service connections serving a population of 10,990. Six full time employees are currently employed by the system.

Some waterline extensions are now in progress, with others soon to come. These Extensions are based on increasing populations in the outlying areas around Grayson, and the continuing development both commercial and residential near the I-64--Ky-7 interchange at Grayson.

OLIVE HILL MUNICIPAL WATER WORKS

PWSID: 0220335
System Type:..... COMMUNITY
Owner Type:..... MUNICIPAL
Surface Source:..... TYGARTS CREEK
Purchase Source:
Well Source:
Sells Water to:
Treatment Plant Capacity (MGD):..... 1.30
Percent Daily Average Production:..... 55.00

Total Tank Storage Capacity (gallons):	250,000.00
Total Service Connections:	0.00
Number of Employees:.....	0.00
Treatment Operator Class:	2D
Distribution Operator Class:.....	3A
Customer Rate for 1,000 Gallons:.....	Not available
O/M costs 1997:.....	Not available
O/M costs per Service Connection:	Not available
Net Revenue 1997:	Not available
Total Water Produced 1997 (gallons):.....	Not available
Water Sold 1997 (gallons):.....	Not available
Unaccounted-for Water 1997 (%):	Not available

The City of Olive Hill serves a population of 7,491 with water, which is treated at their 1.3 million gallons per day treatment plant. The system storage capacity is 870,000 gallons. Raw water is drawn from a city-owned reservoir, which is permanent. There is also a seasonal surface source at Tygart Creek. Olive Hill has three water system operators. The system also purchases water from the Rowan County Water System in Rowan County, based on seasonal availability.

Olive Hill only has two relatively small waterline extension projects under consideration. These two lines are located at the far western part of the system would serve 18 households. Another line being considered would run from the water treatment plant to connect to an existing line near US-60. This would be a transmission line with customers possibly tapping into it later.

RATTLESNAKE RIDGE WATER DISTRICT

PWSID:	0220555
System Type:.....	COMMUNITY
Owner Type:	WATER DISTRICT
Surface Source:	
Purchase Source:	CITY OF GRAYSON
Well Source:	
Sells Water to:	
Treatment Plant Capacity (MGD):.....	0.00
Percent Daily Average Production:.....	0.00
Total Tank Storage Capacity (gallons):.....	786,000.00
Total Service Connections:	2,078.00
Number of Employees:.....	7.00
Treatment Operator Class:	2D
Distribution Operator Class:	
Customer Rate for 1,000 Gallons:.....	8.03
O/M costs 1997:.....	466,977.00
O/M costs per Service Connection:	230.26
Net Revenue 1997:	189,095.00

Total Water Produced 1997 (gallons):.....	0.00
Water Sold 1997 (gallons):.....	87,030,000.00
Unaccounted-for Water 1997 (%):	10.89

The Rattlesnake Ridge Water District (RSRWD) serves a population of 5,577 people with 2,078 service connections. Water is purchased currently from the City of Grayson Utilities and is stored in its eight storage tanks throughout the system coverage area. The district has storage capacity of 786,000 gallons. RSRWD is multi-county by nature also serving customers in Elliott and Lawrence counties. The water system employs three full time water distribution system operators.

As part of their phase 1 expansion RSRWD is in the planning stages of building a new plant which will be located at Grayson Lake, and to also run a transmission line to service a new prison currently being built in Elliott county. Phase 2 of their expansion calls for new distribution lines to be built to service customers mostly in the northwest quadrant of the service boundary.

OTHER SYSTEMS

CAMP ROBERT C WEBB

Camp Robert C Webb is located in Carter County. The system serves a population of 250 and has 1 service connection. The state, transient, non-community system has treatment capacity of 20,300 gallons per day.

PRIVATE DOMESTIC SYSTEMS

About 3,900 people in Carter County rely on private domestic water supplies: 3,100 on wells and 800 on other sources.

In the eastern half of the county most wells in valley bottoms produce adequate amount of water for domestic use. In the rest of the county ground water becomes more scarce with less than half of the wells drilled in valley bottoms able to produce sufficient quantities of water for a domestic supply. Throughout the county, wells on hillsides and ridges become progressively less productive as they move away from the valley bottoms.

Most of the water from drilled wells is very to extremely hard and contains noticeable amounts of iron. Salty water is commonly found in wells drilled less than 100 feet below the level of the principal valley bottoms.

A few springs supply sufficient quantities of water for domestic use. Almost all springs yield less than 5 gpm.
